

### **In the Claims:**

Claims 1-51 were pending at the time of the Office Action.

Claims 1-4, 7-10, 12, 13, 16-21, 23, 24, 26-28, 31-33, 37, 38, 40-42, 45-48 and 51 are rejected.

Claims 5, 6, 11, 14, 15, 22, 25, 29, 30, 34-36, 39, 43, 44, 49, and 50 are objected to.

Please cancel claims 1-4, 7-10, 19-21, 26-28, 31-33, 37, 38, 40-42, and 45-48 without prejudice.

Please amend claims 5, 11, 12, 14-18, 22-25, 29, 30, 34-36, 39, 43, 44, 49, 50, and 51 as indicated below.

Accordingly, claims 5-6, 11-18, 22-25, 29-30, 34-36, 39, 43-44, and 49-51 remain pending as shown in the following complete listing of claims:

**Listing of Claims:**

**Claims 1-4. (Canceled)**

5. (Currently amended) An Internet protocol (IP) filter, comprising processor-executable instructions that, when executed on a processor, perform the following steps:

monitoring Internet protocol data packets transmitted from one or more clients to a server;

obtaining a network address from an IP data packet transmitted by a client;

1            processing IP data packets from the client if a Network address that is  
2            uniquely associated with the client is stored in a client table;

3            ~~The Internet protocol filter as recited in claim 1, further comprising~~  
4            ~~processor executable instructions that, when executed on a processor, perform the~~  
5            ~~following steps:~~

6            if the first Network address is not stored in the client table, retrieving a  
7            client limit value from a client limit field, the client limit value indicating a  
8            maximum number of unique clients for which IP data packets can be processed;

9            if the number of Network addresses in the client table is greater than or  
10           equal to the client limit value, transmitting a signal to each Network address listed  
11           in the client table; and

12           if a client at a second Network addresses does not respond to the signal,  
13           removing the second Network address from the client table, inserting the first  
14           Network address into the client table and processing IP data packets from the first  
15           client.

16

17        6. (Original) The Internet protocol filter as recited in claim 5,  
18           further comprising processor-executable instructions that, when executed on a  
19           processor, perform the following steps:

20           removing the second Network address from the client table; and

21           inserting the first Network address into the client table.

22

23        Claims 7-10.           (Canceled)

24

25        11. (Currently amended)           A method, comprising:

1        detecting when a current client attempts to establish a connection with a  
2        server;

3        determining a unique client identifier that is associated with the current  
4        client;

5        determining if a total number of previous clients having access to the server  
6        is less than a client limit;

7        determining if the current client has previously been allowed to access the  
8        server;

9        providing access to the server if the total number of previous clients having  
10        access to the server is less than a client limit;

11        providing access to the server if the total number of previous clients is  
12        greater than or equal to the client limit and if the current client has previously been  
13        allowed to access the server; and

14        storing the unique client identifier associated with the current client in  
15        memory if access is provided to the current client;

16        ~~The method as recited in claim 7, wherein the determining if the current~~  
17        client has previously been allowed to access the server further comprises:

18                transmitting a signal to each previous client that has been allowed to  
19        access the server; and

20                determining that the current client has previously been allowed to  
21        access the server if at least one of the previous clients fails to acknowledge the  
22        signal.

23

24        12. (Currently amended)        The method as recited in claim 11[[7]],  
25        further comprising:

1                   pre-configuring the client limit; and  
2                   storing the client limit in memory.

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4           13. (Original) The method as recited in claim 12, wherein the client  
5           limit has a pre-defined maximum to which it may be configured.

6

7           14. (Currently amended) A method, comprising:  
8           detecting when a current client attempts to establish a connection with a  
9           server;

10           determining a unique client identifier that is associated with the current  
11           client;

12           determining if a total number of previous clients having access to the server  
13           is less than a client limit;

14           determining if the current client has previously been allowed to access the  
15           server;

16           providing access to the server if the total number of previous clients having  
17           access to the server is less than a client limit;

18           providing access to the server if the total number of previous clients is  
19           greater than or equal to the client limit and if the current client has previously been  
20           allowed to access the server;

21           storing the unique client identifier associated with the current client in  
22           memory if access is provided to the current client;

23           The method as recited in claim 7, further comprising:

24           pre-configuring the client limit;

25           encrypting the client limit; and

storing the encrypted client limit in memory.

15. (Currently amended) A method, comprising:  
detecting when a current client attempts to establish a connection with a

determining a unique client identifier that is associated with the current client;

determining if a total number of previous clients having access to the server is less than a client limit;

determining if the current client has previously been allowed to access the server;

providing access to the server if the total number of previous clients having  
access to the server is less than a client limit:

providing access to the server if the total number of previous clients is greater than or equal to the client limit and if the current client has previously been allowed to access the server;

storing the unique client identifier associated with the current client in memory if access is provided to the current client:

The method as recited in claim 7, further comprising:

retrieving an encrypted client limit; and

decrypting the encrypted client limit to derive the client limit.

16. (Currently amended) The method as recited in claim 15[[7]], wherein the determining the unique client identifier that is associated with the

1 current client further comprises identifying an Internet protocol address from a  
2 data packet transmitted by the current client.

3  
4 17. (Currently amended) The method as recited in claim 15[[7]],  
5 further comprising storing the unique client identifiers in a client table in memory.

6  
7 18. (Currently amended) The method as recited in claim 15[[7]],  
8 wherein the client identifier is a network address.

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10 Claims 19-21. (Canceled)

11  
12 22. (Currently amended) A server that provides access to a limited  
13 number of clients, comprising:

14 memory;

15 a network interface configured to handle communications between the  
16 server and a plurality of clients;

17 an operating system stored in the memory;

18 a client limit stored in the memory, the client limit denoting a number of  
19 unique clients that are allowed to access the server;

20 an IP stack in the memory that is used to process data packets transmitted  
21 from clients;

22 a client table in the memory for storing a unique Network address for each  
23 client that accesses the server;

24 a communications filter configured to:

25

1                   allow access to a first client if the total number of clients that have  
2                   accessed the server is less than the client limit, or if the total number of clients that  
3                   have accessed the server is greater than or equal to the client limit and the first  
4                   client has previously accessed the server;

5                   search the client table for a second Network address associated with  
6                   the first client and determine that the first client has previously accessed the server  
7                   if the second Network address is found in the client table; and

8                   The server as recited in claim 21, wherein the communications filter is  
9                   further configured to determine the second Network address by signaling each  
10                  Network address listed in the client table and determine that the second Network  
11                  address is a network address listed in the table that does not acknowledge the  
12                  signal.

13

14                  23. (Currently amended)        The server as recited in claim 22[[19]],  
15                  wherein the client limit is configurable.

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17                  24. (Currently amended)        The server as recited in claim 22[[19]],  
18                  wherein the Communications filter is further configured to signal that the client  
19                  limit has been exceeded and to deny server access to the first client if the total  
20                  number of clients that have accessed the server is greater than or equal to the client  
21                  limit, and the first client has not previously accessed the server.

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23                  25. (Currently amended)        A server that provides access to a limited  
24                  number of clients, comprising:  
25                  memory;

1        a network interface configured to handle communications between the  
2        server and a plurality of clients;

3        an operating system stored in the memory;

4        a client limit stored in the memory, the client limit denoting a number of  
5        unique clients that are allowed to access the server;

6        an IP stack in the memory that is used to process data packets transmitted  
7        from clients;

8        a client table in the memory for storing a unique Network address for each  
9        client that accesses the server; and

10        a communications filter configured to allow access to a first client if the  
11        total number of clients that have accessed the server is less than the client limit, or  
12        if the total number of clients that have accessed the server is greater than or equal  
13        to the client limit and the first client has previously accessed the server;

14        ~~The server as recited in claim 19, wherein the client limit is encrypted, the~~  
15        server further comprising a decryption module configured to decrypt the encrypted  
16        client limit.

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18        Claims 26-28.        (Canceled)

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20        29.        (Currently amended)        A method for providing server access to  
21        a limited number of clients, the method comprising:

22        monitoring TCP/IP packets sent from a plurality of clients to a server;

23        obtaining a unique Network address for each client from one or more  
24        packets transmitted by the client;

25        storing the Network address of each client that accesses the server;

1           determining if a client limit has been reached; and  
2           providing access to a first client upon determining if the client limit has  
3           been reached, or upon determining if the first client has previously accessed the  
4           server;

5           The method as recited in claim 26, wherein the determining if the first  
6           client has previously accessed the server further comprises:

7            sending a signal to each of multiple Network addresses of clients  
8            that have accessed the server; and

9            if there is no response to one of the signals, determining that the first  
10          client has previously accessed the server using the Network address of the client  
11          from which there was no response detected.

12

13          30. (Currently amended)        A method for providing server access to  
14          a limited number of clients, the method comprising:

15           monitoring TCP/IP packets sent from a plurality of clients to a server;  
16           obtaining a unique Network address for each client from one or more  
17           packets transmitted by the client;

18           storing the Network address of each client that accesses the server;  
19           determining if a client limit has been reached;  
20           providing access to a first client upon determining if the client limit has  
21           been reached, or upon determining if the first client has previously accessed the  
22           server;

23           The method as recited in claim 26, further comprising:

24            retrieving an encrypted client limit; and

25            decrypting the encrypted client limit to derive the client limit.

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2       Claims 31-33.           (Canceled)  
3

4       34. (Currently amended)       An operating system stored on a  
5       computer-readable medium, the operating system comprising:

6               an IP stack for processing Internet protocol data packets received from  
7       multiple clients;

8               a client limit field containing a client limit value that denotes a maximum  
9       number of clients that may access the IP stack;

10               a client table containing a unique Network address for each client that has  
11       accessed the operating system; and

12               a communications filter configured to:

13               determine a first Network address of a first client attempting to  
14       access the operating system, search the client table for the first Network address,  
15       and allow the first client to access the operating system if the first Network  
16       address is found in the client table;

17               allow the first client to access the operating system if the number of  
18       Network addresses in the client table is greater than or equal to the client limit  
19       value and the first client has previously accessed the operating system using a  
20       second Network address that is stored in the client table;

21               The operating system as recited in claim 33, wherein the communications  
22       filter is further configured to:

23               transmit a signal to each Network address listed in the client table;

24               monitor for an acknowledgement to each signal; and

if an acknowledgement is not received from a network address in the client table, determining that the non-acknowledging Network address is the second Network address used by the first client.

35. (Original) The operating system as recited in claim 34, wherein the Communications filter is further configured to replace the second Network address in the client table with the first Network address.

36. (Currently amended) An operating system stored on a computer-readable medium, the operating system comprising:

an IP stack for processing Internet protocol data packets received from multiple clients;

a client limit field containing a client limit value that denotes a maximum number of clients that may access the IP stack;

a client table containing a unique Network address for each client that has accessed the operating system; and

a communications filter configured to determine a first Network address of a first client attempting to access the operating system, search the client table for the first Network address, and allow the first client to access the operating system if the first Network address is found in the client table;

~~The operating system as recited in claim 31, wherein the client limit value is encrypted, and the operating system further comprises a decryption module that is configured to decrypt the client limit value.~~

Claims 37-38. (Canceled)

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2       39. (Currently amended)       A computer-readable medium  
3 comprising computer-executable instructions that, when executed on a computer,  
4 perform the following steps:

5       determining a first Internet Protocol (IP) address transmitted from a first  
6 client to a server;

7       searching a client table for the first Network address;

8       allowing the first client to access the server if the first Network address is  
9 found in the client table;

10      The computer readable medium as recited in claim 37, further comprising  
11 computer executable instructions that, when executed on a computer, perform the  
12 following steps:

13      transmitting a signal to each Network address listed in the client table; and  
14      if there is no response from one of the Network addresses signaled,  
15      allowing the first client to access the server, removing the non-responsive Network  
16      address from the client table, and inserting the first Network address into the client  
17      table.

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19      Claims 40-42.       (Canceled)

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21      43. (Currently amended)       A computer system, comprising:

22       a processor;

23       a network interface card to handle communications with multiple clients;

24       memory;

25       a global system registry;

1        a client table having one entry for each client allowed to access the system,  
2        each entry including a unique Internet protocol (IP) address for each client; and  
3        a communications filter configured to:

4            retrieve a client limit from the global system registry;  
5            determine a first Network address that is associated with a first client  
6        attempting to access the system;

7            allow the first client to access the system if the first Network address  
8        is stored in the client table or if the number of client table entries is less than the  
9        client limit;

10          store the first Network address in the client table if the first client is  
11        allowed to access the system;

12          allow the first client to access the system if the number of entries in  
13        the client table is greater than or equal to the client limit and if the first client has  
14        previously accessed the system; and

15        ~~The computer system as recited in claim 41, wherein the Communications~~  
16        ~~filter is further configured to~~ determine if the first client has previously accessed  
17        the system by transmitting a signal to each Network address listed in the client  
18        table, monitoring responses to the signals to determine if a client at a second  
19        Network address is no longer using the Network address, substituting the first  
20        Network address in the table for the second Network address and allowing the first  
21        client to access the system if the client at the second Network address does not  
22        respond to the signal.

23  
24        44. (Currently amended)        A computer system, comprising:  
25            a processor;

1        a network interface card to handle communications with multiple clients;  
2        memory;  
3        a global system registry;  
4        a client table having one entry for each client allowed to access the system,  
5        each entry including a unique Internet protocol (IP) address for each client; and  
6        a communications filter configured to:

7                retrieve a client limit from the global system registry;  
8                determine a first Network address that is associated with a first client  
9        attempting to access the system;

10               allow the first client to access the system if the first Network address  
11        is stored in the client table or if the number of client table entries is less than the  
12        client limit; and

13               store the first Network address in the client table if the first client is  
14        allowed to access the system;

15        ~~The computer system as recited in claim 40, wherein the client limit is~~  
16        encrypted, the computer system further comprising a decryption module  
17        configured to decrypt the encrypted client limit.

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19        Claims 45-48.        (Canceled)

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21        49.    (Currently amended)        A communications protocol filter,  
22        comprising processor-executable instructions that, when executed on a processor,  
23        perform the following steps:

24                monitoring communications protocol data packets transmitted from one or  
25        more clients to a server;

1        obtaining a network address from a communications protocol data packet  
2        transmitted by a client;

3        processing communications protocol data packets from the client if a  
4        Network address that is uniquely associated with the client is stored in a client  
5        table;

6        ~~The communications protocol filter as recited in claim 45, further~~  
7        ~~comprising processor-executable instructions that, when executed on a processor,~~  
8        ~~perform the following steps:~~

9        if the first Network address is not stored in the client table, retrieving a  
10      client limit value from a client limit field, the client limit value indicating a  
11      maximum number of unique clients for which communications protocol data  
12      packets can be processed;

13      if the number of Network addresses in the client table is greater than or  
14      equal to the client limit value, transmitting a signal to each Network address listed  
15      in the client table; and

16      if a client at a second Network addresses does not respond to the signal,  
17      removing the second Network address from the client table, inserting the first  
18      Network address into the client table and processing communications protocol  
19      data packets from the first client.

20

21      50. (Original) The communications protocol filter as recited in claim  
22      49, further comprising processor-executable instructions that, when executed on a  
23      processor, perform the following steps:

24      removing the second Network address from the client table; and  
25      inserting the first Network address into the client table.

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2       51. (Currently amended)       The communications protocol filter as  
3 recited in claim 49[[45]], wherein the communications protocol is an Internet  
4 protocol and the communications protocol data packets are Internet protocol data  
5 packets.

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